

Providence Cove Lands
(Northeast Corridor Project)

HAER No. RI-24

Bounded on the North by Smith Street, on the
east by the Mohassuck River, on the south by
Exchange Street, and on the west by the Providence
and Worcester Railyards
Providence
Providence County
Rhode Island

HAER
RI,
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175-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

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Location: Bounded on the north by Smith Street, on the east by the Mohassuck River, on the south by Exchange Street, and on the west by the Providence and Worcester Railyards, Providence, Providence County, Rhode Island

Present Owner: Varied

Significance: The Providence Cove Lands, created by the gradual filling and alteration of the Great Salt Cove, are significant in the economic and industrial history of Providence. The Cove Lands were originally from a transportation center, and the history of this area is, in effect, a history of changes in American transportation from the late 18th century to the present.

Project Information: The present configuration of the Cove Lands will be affected by the Northeast Corridor Improvement Project of the Federal Railroad Administration. Mitigative documentation was prepared by DeLeuw, Cather, Parsons, Washington, D. C. for the U. S. Department of Transportation, September 1983.

Transmitted by: Jean P. Yearby, HAER, 1985

For information on specific structures within the Cove Lands, see:

BLACKSTONE CANAL	HAER No. RI-7
UNION STATION VIADUCT	HAER No. RI-14
PROVIDENCE UNION STATION	HABS no. RI-288
PROMENADE STREET INTERLOCKING TOWER	HAER No. RI-23
RHODE ISLAND STATE HOUSE	HABS No. RI-155

HISTORICAL INFORMATION

The area of Providence, Rhode Island, known as the Providence Cove Lands, is now characterized by elevated railroad lines, railroad yards, channelized rivers, interstate highways, and parking lots. One hundred and fifty years ago, however, this was an estuary known as the Great Salt Cove (Figure 3), formed at the confluence of the Moshassuck and Woonasquatucket rivers as they combined to create the Great Salt River (Providence River). The cove was a shallow tidewater area fringed by marsh and overlooked by high points such as Smith's Hill on the north and The Neck (College Hill) to the east. During the 19th century, the Cove Lands were created by the gradual filling and modification of this body of water by both canal and railroad companies and by the city of Providence.

Roger Williams purchased land that was to become Providence from the Indians between 1636 and 1638, and early settlement took place at the foot of College Hill near a natural spring. An agrarian community was established adjacent to the sheltered cove and the freshwater spring. Equal lots were laid out between Towne (Main Street) and Benefit Streets on the east side of the cove, and each family received additional farmland south of the cove in the area known as Weybosset. Though the agrarian-based settlement survived, it never flourished because of the hardships imposed by its unproductive soils (Figure 4). Therefore, after King Phillip's War in 1676, many of the residents focused their attention on a seafaring economy. As early as 1722, James and Obadiah Brown were involved in trade with the West Indies. Wharves and warehouses began to line the west side of Towne Street along the east bank of the cove and Providence River [Greene 1886, 49]. By the mid-eighteenth century, ships were being built north of Broad Lane (Smith Street) along the west bank of the Moshassuck River. Sea trade became a profitable enterprise and Providence was known as a major shipbuilding center, with one of its larger operations located on the Weybosset side in an area that is now the center of Kennedy Plaza.

Increased prosperity led to increased development. Because expansion of the original east side was restricted by the Hill, the demand for space by 1780 had led to the first filling of the Great Salt Cove and the construction of new wharves. In 1792, the east side of the cove was filled again, which provided a new street known as North Water, now Canal Street (Figure 4). After a devastating storm in 1815, the cove was closed to sea-going vessels with the construction of a fixed span bridge at Weybosset Point. The appearance of the cove in 1827 can be seen in a contemporary drawing (Figure 5).

From the beginning of the 1790s, the Providence economy became further diversified. Shipping, seafaring and mercantile interests were joined by new and quickly expanding industrial interests. Chief among these was the manufacture of textiles. The industry was introduced into Rhode Island by an English immigrant, Samuel Slater. Slater, in collaboration with Moses Brown, transformed the textile manufacturing business in America into a factory-based industry [Fink 1981, 5]. As a result of the Embargo of 1807 and the War of 1812, many commercial investments were channeled into the textile industry, and Rhode Island was placed at the forefront of the factory-based cotton industry. Early textile mills operated by water power and therefore were located along the major rivers.

In order to process these textiles, bleacheries and dye-and-print works sprang up all over Providence and vicinity. Foundries, ironworks and machine companies produced the machinery for the factories. New transportation facilities were required by the developing industries, since they were in outlying regions not convenient to the wharves and docks.

The greatest obstacle to rapid communication and transportation was the condition of the roads. Turnpikes were introduced as a method to charge the user for the upkeep and improvement of the roadway. Before the introduction of railroads, the turnpike was considered the highest developed form of land communication [Greene 1886, 128].

By 1829, complaints were heard concerning the slow transport over the turnpike roads by wagon teams and stagecoaches. It is reported that during that period 27,000 tons of freight were carried annually between Boston and Providence, with only 3,400 tons of this over water--either through the canal or around Cape Cod in open waters. The first suggestion of a railroad using steam locomotives for motive power in Providence was recorded in 1832 by the Providence Gazette [Greene 1886, 130].

The first steam railroad to operate out of Providence was the Boston and Providence Railroad, which made its first run in 1835. Two years later, a railroad connected Providence with New York. It was the Providence and Worcester Railroad, however, that had the first major physical effect on the city. The railroad had fought bitterly for the right to build a terminal close to the business center, which by the mid-nineteenth century had become the Exchange Street area. Finally, in 1846, the Providence City Council granted the Providence and Worcester Railroad the right to reduce the cove to an elliptical basin surrounded by a promenade, to channel the Moshassuck River, and to build tracks, yards and a terminal on the newly-filled area [Cady 1957, 115]. Three openings were maintained in the elliptical basin for the flow of the Woonasquatucket River (west side) and the Moshassuck River (east side) into the Cove Basin and for the flow of the cove water out of the Providence River (south side). This elliptical cove became the nucleus of railroad activity in Providence for fifty years. The newly-created lands were

soon filled with railroad buildings, most of which were associated with railroad maintenance activities [Figure 9].

The Providence and Worcester Railroad built the central railroad station after making arrangements with the Boston and Providence Railroad to share tracks and use the same central station. When the New York, Providence and Boston Railroad constructed a new entrance into the city in 1848, they also used the same central station. This depot, plus two freight stations which were located in the yards west of Canal Street, were built from designs of Thomas A. Telft, one of the most prominent architects in the city's history. It has been said that this was the first major American railroad station [Meeks 1956, 69], and it was the first station in this country designed in the new Romanesque manner. The station was used as a terminal, with wings at either end which contained sheds over spur tracks. In 1885, this station was voted one of the twenty best buildings in the United States, "a rare distinction for any depot, let alone one thirty-seven years old" [Meek 1956, 69]. The building burned in 1896, which left the two freight buildings to the north as the only reminders of Thomas A. Telft's talents. The last of these two buildings burned in 1980 [Providence Journal, September 13, 1980].

In 1854, the Hartford, Providence and Fishkill Railroad was opened, with tracks entering the city from the southwest [Cady 1957, 115-119], and by 1857 the railroad had constructed a freight house on its spur about an eighth of a mile east of the engine house. Five years later, it was joined by the New York, Providence and Boston Railroad Company, whose tracks entered the city from the south [Cady, 1957, 105]. Eventually, nine railroads served Providence, and with expanding railroad construction came the need for more land in the Cove area.

Providence history between 1850 and the early 1900s was marked by fierce struggles between the city and the railroad companies over land use and the location of railroad facilities. By the late 1860s, the canalization of the Moshassuck River was completed as an extension of the former Blackstone Canal, and that of the Woonasquatucket River was well advanced. In 1856, Providence and the nation were faced with a financial panic. The city provided jobs and food for the poor in the winter of 1856. Those who were not able to work were provided with food and fuel without having to suffer the denigration of going to the poor house. Those who were able to work were set to the task of filling in the back cove lands, which they did with fill obtained from the partial leveling of Smith's Hill [Greene 1886, 130].

Throughout the latter part of the 19th century, there had been an increasing pressure from several interest groups to fill in the cove basin. As early as 1868, the discharge of sewage and the dumping of trash into the cove basin was such a serious sanitation problem that the city had considered filling it. By the 1880s, this was again an issue. In 1881, over three thousand houses had

connections to sewers, and over two-thirds of these emptied into the water above Fox Point and the Crawford Street Bridge. For about twelve hours each day, the incoming tide would deposit it south of and into the cove basin. The odor was especially offensive at ebb tide, since the deposition was more rapid and sewage remained on the bottom of the basin [Providence Journal 1881-1882, series "The Cove Lands"]. Silting was another major problem of the elliptical cove basin. It was dredged in 1878, but because of the nature of the elliptical retaining walls, a 3- to 3.7-meter portion of mud was left intact around the entire perimeter of the basin (Figures 10 and 11).

By 1881, there was considerable public criticism of the Providence railroad facilities. Compared with those of Worcester or Boston, they were outdated and overcrowded. Many felt that the city would benefit if the railroad companies were permitted to expand into the area, then encompassed by cove waters.

Railroad personnel as well as a number of other citizens viewed the use of space in the center of the city's business area for water, trees and grass as a waste. To strengthen their argument, they often cited the sanitation problems of the cove or complained that the cove promenade was a "resort for loafers" who were "not of a decent class" [Providence Journal 1881-1882, series "The Cove Lands"]. The general environment of the cove basin can be seen in a photograph taken in 1886 from Smith's Hill (Figure 12). Two commissions were appointed in 1881 to review the possibility of selling the cove lands to the railroads. One commission was to appraise and negotiate sale, while the other was to plan the expansion of facilities. In light of their report, submitted in 1886, the commission appears to have been generally ineffective, but the city did condemn much of the cove lands [Public Laws 1884, Chap. 442]. At about the same time, another group, the Public Park Association, urged the city to fill the cove for recreational use. The Public Park Association sponsored a paper by H. W. S. Cleveland (1883) of Chicago, in which the filling of the cove basin, creation of a cove park, and relocation of railroad facilities were recommended.

In 1887, the city again addressed the problem of the cove lands and, to that end, appointed a joint special committee headed by J. W. Whittemore and A. P. Boller to study terminal facilities. The work of this committee generated the final decision to fill in the cove basin [Cady 1957, 163-165]. The plan called for filling the cove, constructing a new station on Gaspee Street near the old State Prison, and creating a park that would provide an approach from Exchange Place. The decision having been made, the first step was the City Council's order to fill the cove basin to build retaining walls for the newly-channeled Woonasquatucket and Moshassuck rivers. The railroads rejected the remaining recommendations of the report.

It was generally agreed that more space was needed for railroad operations, but as Welcome Green [1886, 98] stated, "Where to obtain it is the question on which the people are divided."

Advocates of retaining the cove essentially agreed that railroad yard space could be obtained in the Woonasquatucket Valley, with the tracks coming from the north and going west of Smith's Hill, tunneling where necessary, placing the depot in the Woonasquatucket Valley. Others wanted to bring the tracks north of the cove basin, directly adjacent to Smith's Hill, with the new depot west of the cove promenade. These schemes were finally rejected in favor of a plan to fill in the cove, use the space for the railroad, and carry the tracks through the city with the new station to be located north of the previous depot. This was the plan that was eventually executed.

The final engineering report was made January 16, 1889, by S. L. Minot, engineer for the Old Colony Railroad, and E. P. Dawley, chief engineer for the New York, Providence and Boston Railroad, who had been directed to analyze alternative railroad proposals. One was for an elevated rail bed and station; the other was for an at-grade rail bed with highways carried over the tracks [Francis 1909, 262].

The elevated layout, which provided for the location of a station and approach tracks on a raised embankment, carried streets and highways underneath. The advantages of this plan were that

All trains would be out of the way of the public; they could be run with absolute safety to and from the station; railroad property could be fully enclosed and protected; the platforms of the station could be kept private from all passengers until the arrival or departure of trains [Francis 1909, 262].

It took at least twenty years of arguments for opposing groups to agree on this proposal. The reasons for the success of the proposal, as eventually drawn, are described by Francis [1909 262].

To draw a plan which would overcome all objections that the discussion of some twenty years's consideration had adduced was no small task. When presented, it so successfully defied adverse criticism that it had no outspoken opponents. It was designed to embrace all the good features of the plans that had gone before and omit all the bad ones, harmonizing the interests of both city and railroads and meeting objections of all reasonable opponents of previous schemes. It can be said that it was a plan designed in all its features by railroad men

and railroad engineers, who were reasonably conversant with the needs of the railroads and the notions of prominent citizens, and with some slight modifications it was accepted by all parties interested and finally carried out.

The Public Park Association remained in opposition to the plan and objected to the appropriation of a large area of valuable land west of Cove Street for freight yards and the erection of the elevated barrier between the civic center and the lands to the north [Cady 1957, 165]. The viaduct embankment was referred to as a "Chinese Wall," a term which has persisted to the present.

The first step in the plan's implementation was the filling in of the cove basin. It was estimated that this would require 500,000 yards of dirt at 30¢ per yard [City Directory 1890]. The city undertook this action and sold about forty-one acres of the new lands to the railroad (now the New York, New Haven & Hartford Railroad) at \$1.25 per square foot [Engineering News 1897, 59]. The land and buildings occupied by the previous depot and tracks were purchased by the city at \$4 per square foot. Land for the new freight yards was sold to the railway for 75¢ to \$1 per square foot. In all, the New York, New Haven & Hartford Railroad purchased forty-one acres from the city and the city purchased three acres formerly used by the railroad [Francis 1909, 262]. The railroad purchased other land from private owners, which resulted in a total holding of approximately 70 acres between Acorn and Smith Streets, about twice its previous holding. The retaining walls for the river were completed in 1892 and provided a 100-foot wide channel for the Moshassuck (Figure 13). These two rivers converged east of the newly-proposed railroad buildings into the Providence River (Figure 14). At the same time the retaining walls were built, the cove promenade and the three river bridges in the promenade were removed. The total cost of this phase of the project was \$339,878. Some money was saved by reusing stone from the former cove basin walls, and fill materials from the further leveling of Smith's Hill--a process begun in 1856--were sold to the city for 10¢ to 15¢ per yard, depending on distance carted [City Document No. 25, 1890, 6]. The contract for this work was let in September 1888 to James J. Newman of Providence. The work was under the direction of William D. Bullock as Engineer-in-Charge and Henry N. Francis, Resident Engineer. Two city engineers directed the work--Samuel M. Gray until May 1980, followed by J. Herbert Shedd.

New roads, such as Francis and Gaspee Streets which extended south to Exchange Place and Promenade Street which extended east to Canal Street, were constructed to provide north-south access. At the same time, the New York, New Haven & Hartford Railroad was building the elevated tracks on earthen embankments, stone walls or steel girders. The two freight yards were placed north of the new station; one of them was bounded by Smith and Gaspee Streets and the newly channeled Moshassuck River, and the other was located in the former Woonasquatucket River valley and Great Salt Cove.

PROJECT INFORMATION

As part of the Northeast Corridor Improvement Project of the Federal Railroad Administration, there will be an 800-foot northerly shift of the existing railroad alignment toward the State House and the at-grade construction of the railroad. A new railroad station will be built over the railroad tracks, approximately twelve hundred feet from the existing station. The new track location will be essentially the same as that proposed in 1883, but the station location is further east along Gaspee Street.

Local roadway systems are to be relocated to provide access to the station and to improve circulation in the central business district, and the existing railroad embankment will be removed. A new interstate highway interchange will be constructed with the extension of Route 6 as a six-lane boulevard from Gaspee Street to Memorial Square. A direct bus, auto, and pedestrian route is to be provided by the Francis Street flyover between the State House and downtown. The rail realignment and highway improvements are intended to encourage commercial development of the land between the current tracks and the State House, called the Capital Center Development Center.

As a result of these projects, the rail viaduct, the Gaspee, Francis and Promenade street and Woonasquatucket River bridge will be demolished. The existing Union Station will become the focal point for the commercial development of the area. The East Side Tunnel will be closed, and the viaduct linking the East Bay with the main line will be eliminated. The road realignment will require relocating Gaspee Street further north toward the State House, and some of the lawn area will be taken for rail use.

The changes being proposed will completely alter the physical setting of the Providence Cove Lands, with the area continuing in its function of providing a transportation network while accommodating contemporary commercial and economic needs of the city and region.

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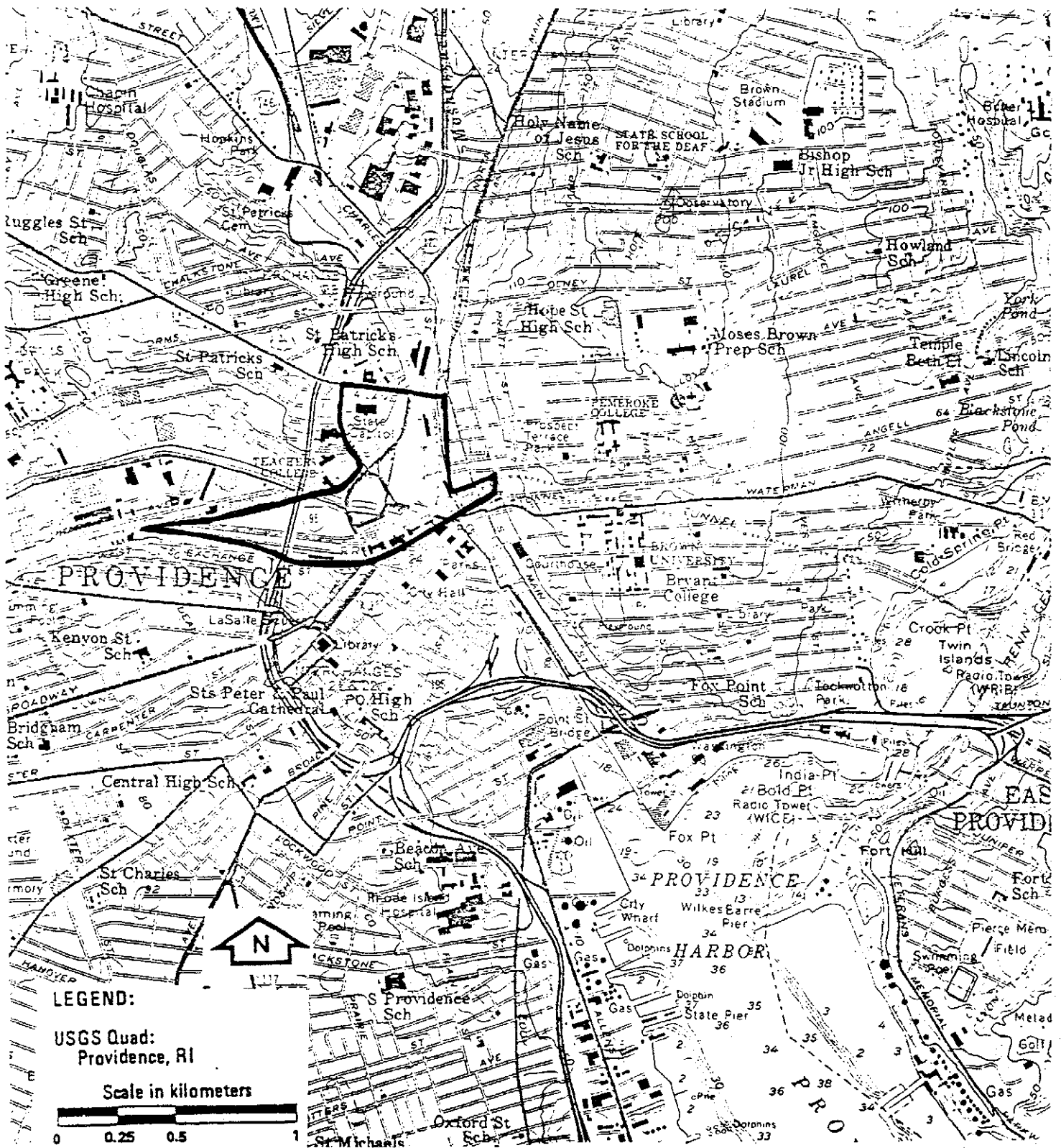
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Location of Providence Cove Lands.

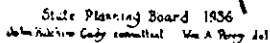


Figure 3. The Town of Providence in 1700. The town clustered around the Cove, with most homes on The Neck, close to the Cove and the Moshassuck River. Farm lands and meadowlands were both to the east on the Six-Acre Lots, and to the west.

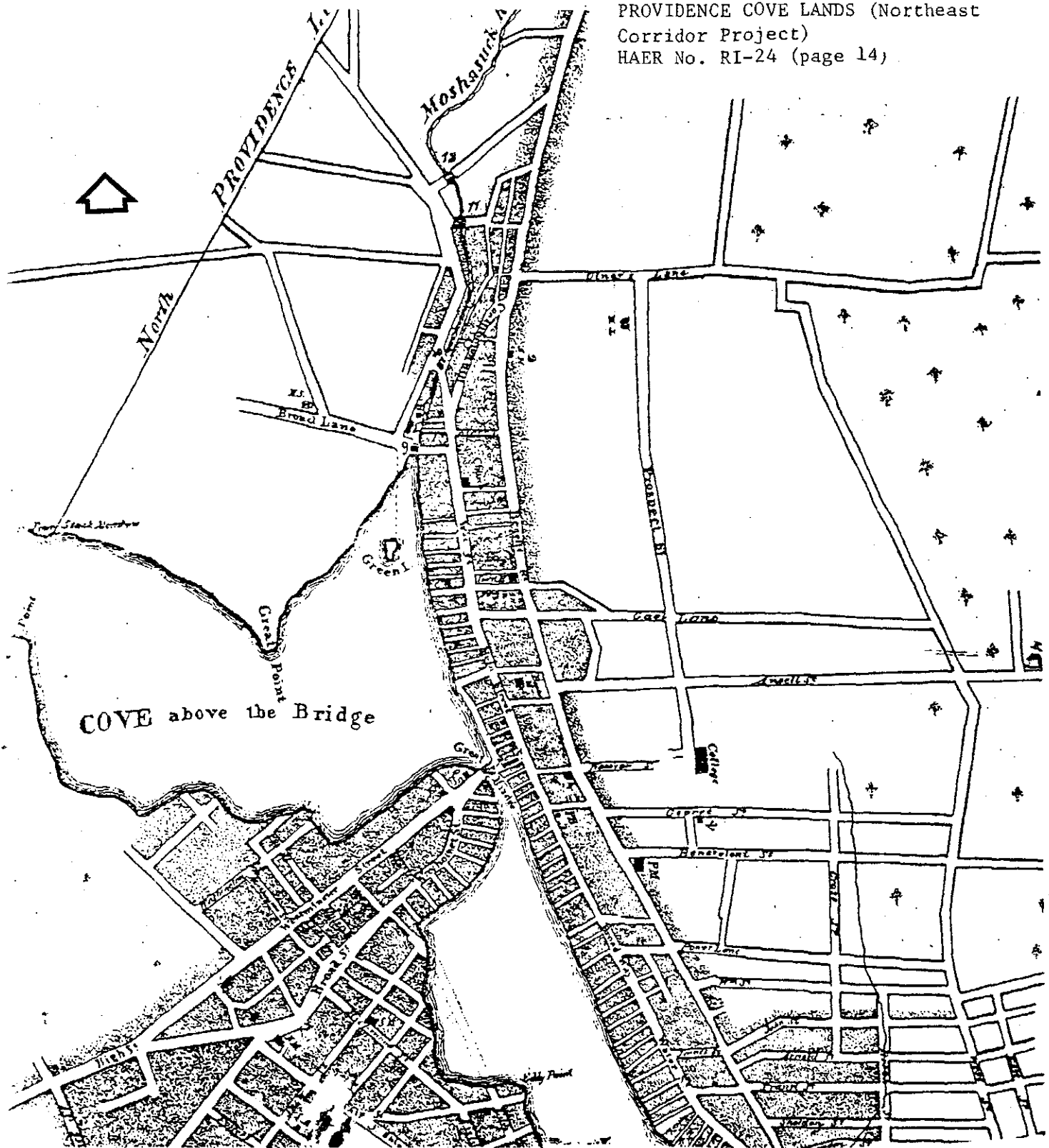


Figure 4. Providence in 1803. Developed areas of the Town are shaded. The Great Bridge provides a crossing to the Weybosset area to the southwest, and the Broad Lane and Mill Bridge provide crossings over the Moshassuck River.

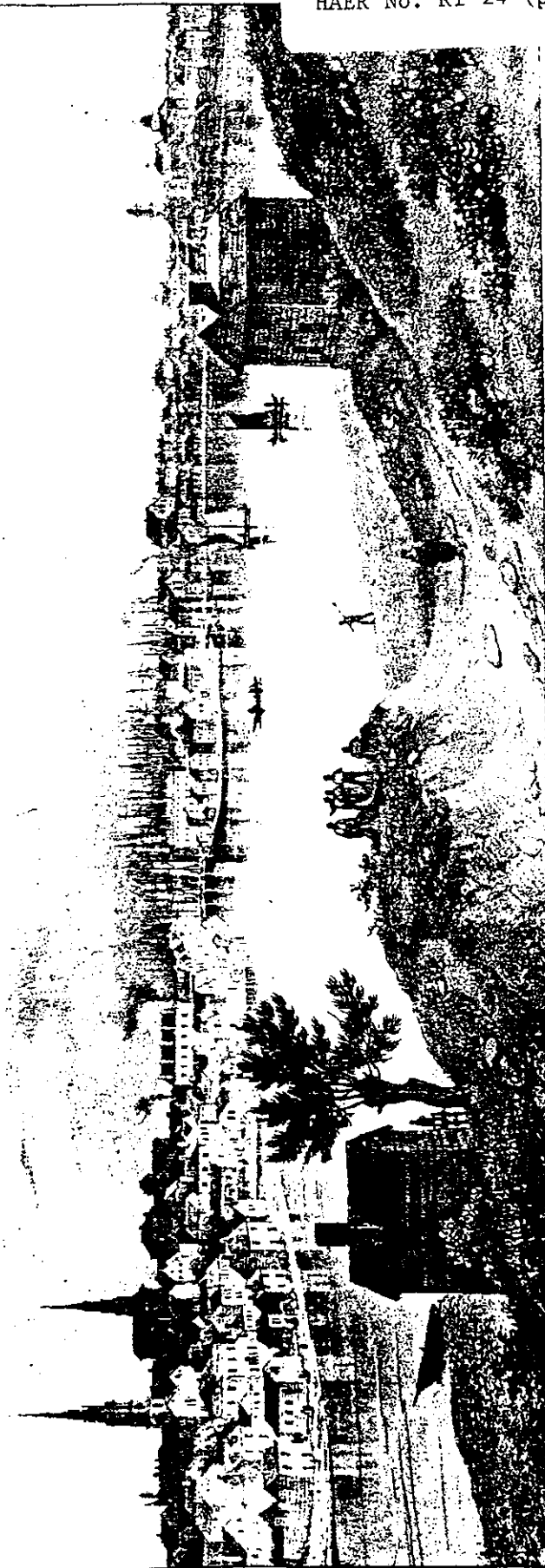


Figure 5. View from north toward Weybosset Bridge across Great Salt Cove, 1827.
In foreground is Whipple (Green) Island and the base of Smith's Hill
in the lower right foreground. (by Devoy after a drawing by
Jacques Milbert) Courtesy The Rhode Island Historical Society.

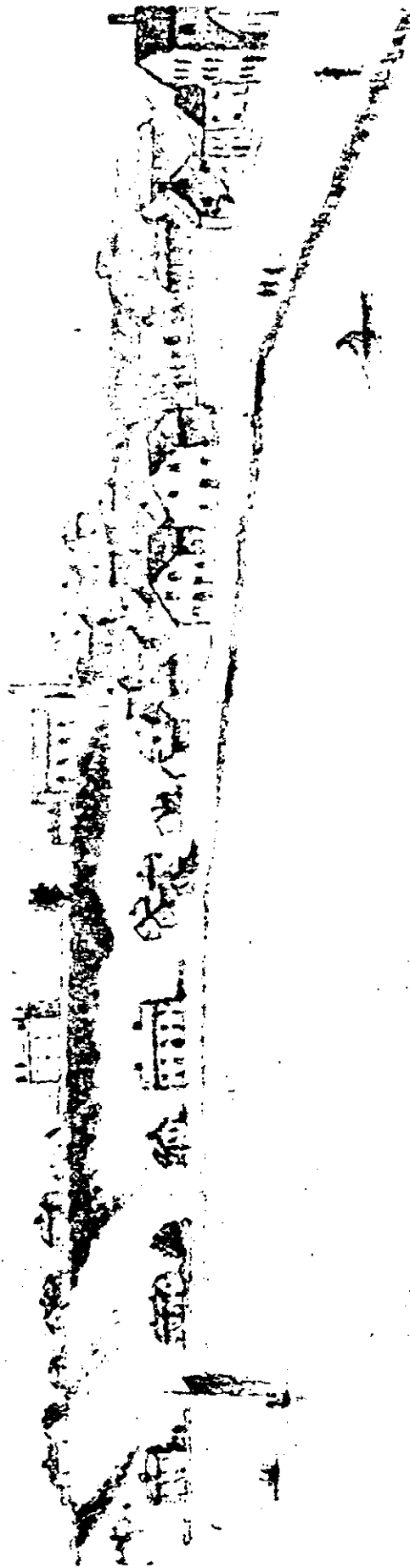


Figure 7. North shore of Great Salt Cove, 1846. Canal Boat Basin is in right center. The areas is dominated by warehouses and worker's housing. Large building on top of Smith's Hill is St. Patrick's Church. Watercolor by E.L. Peckham. Courtesy Rhode Island Historical Society.

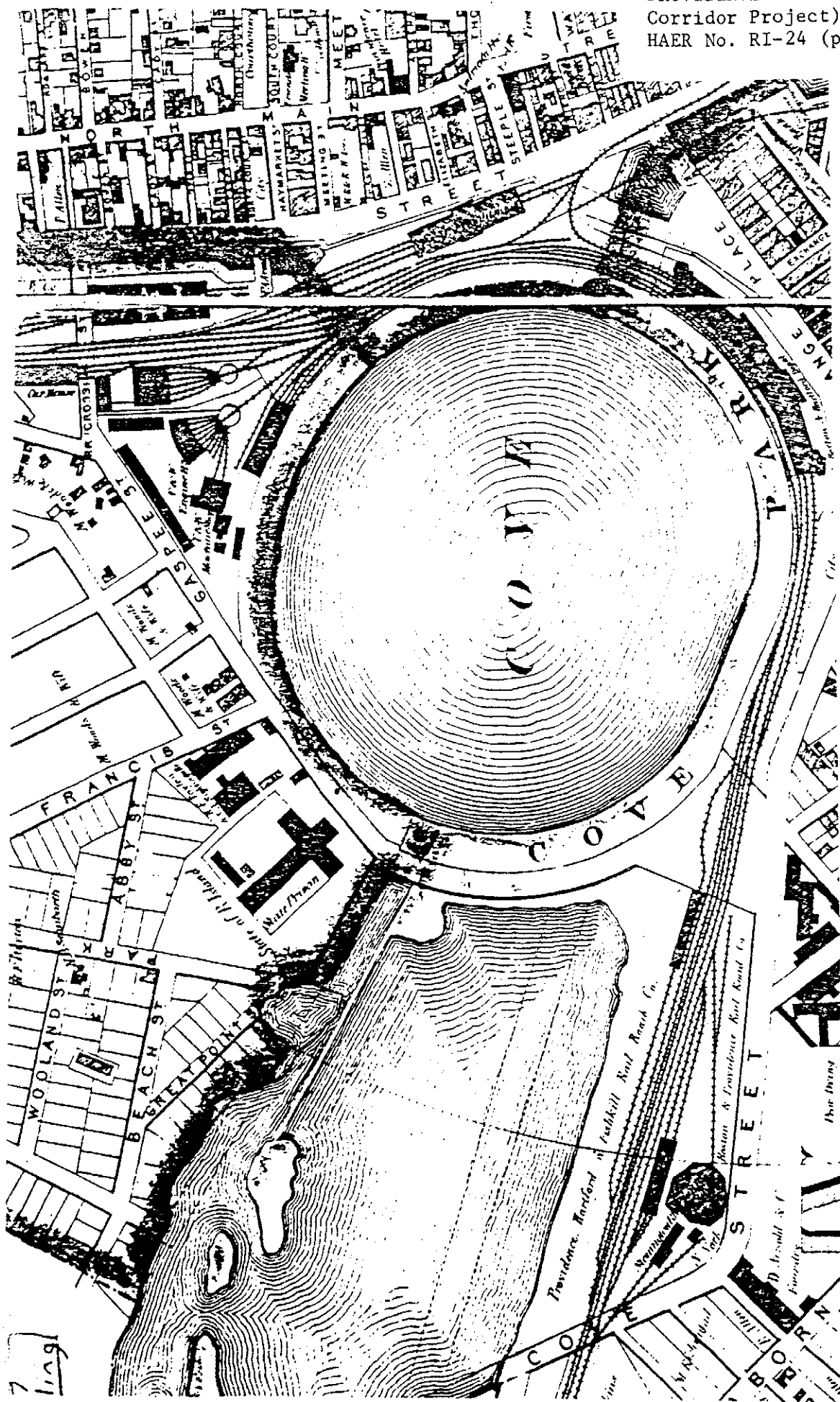


Figure 9. Map of Providence, 1857. Detail of elliptical Cove and new railroad facilities to the north and west of the Cove. Map by H.F. Walling, scale 350' to an inch.

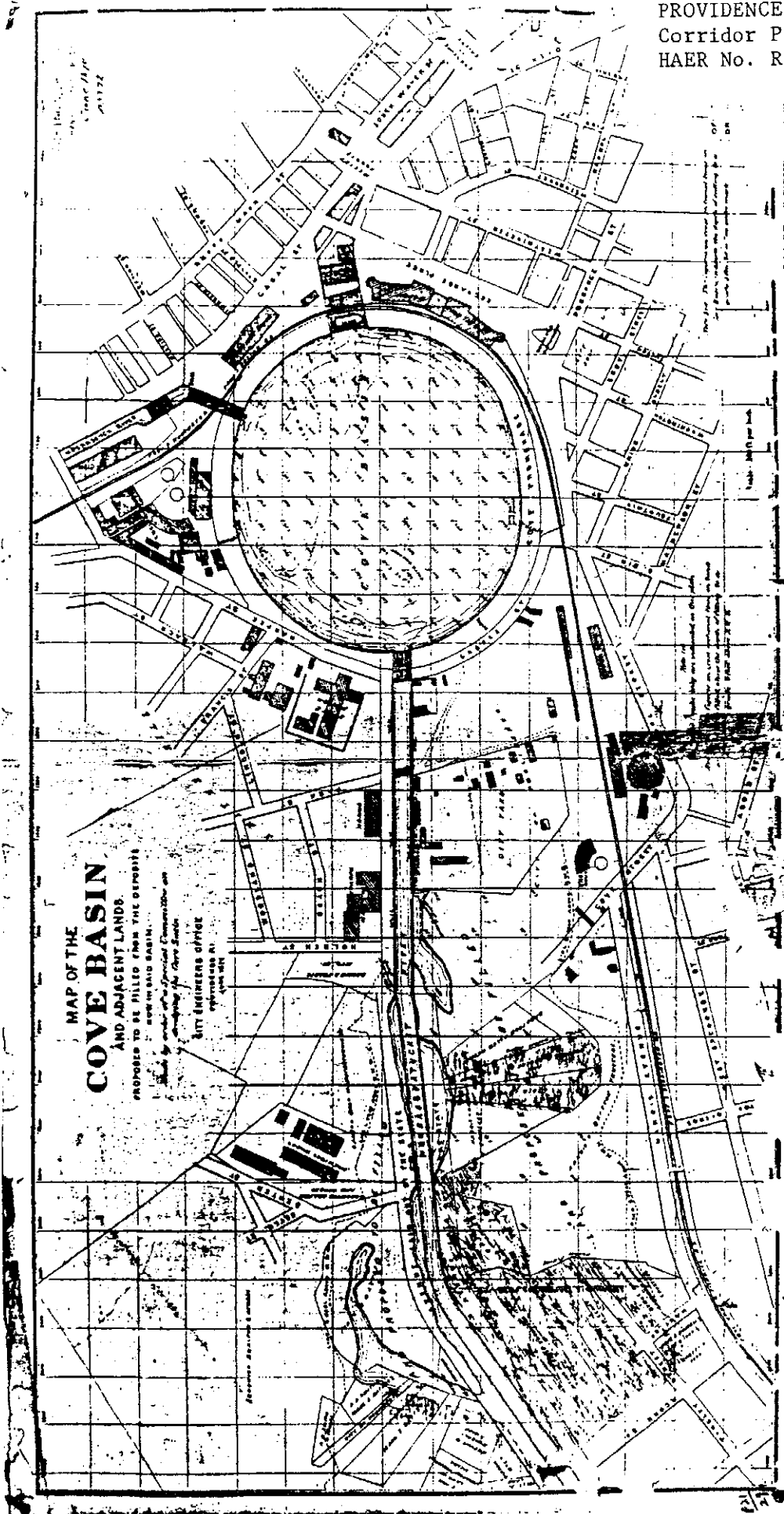


Figure 10. Map of the Cove Basin and Adjacent Lands, 1876. Original drawing at Public Works Department, City of Providence.

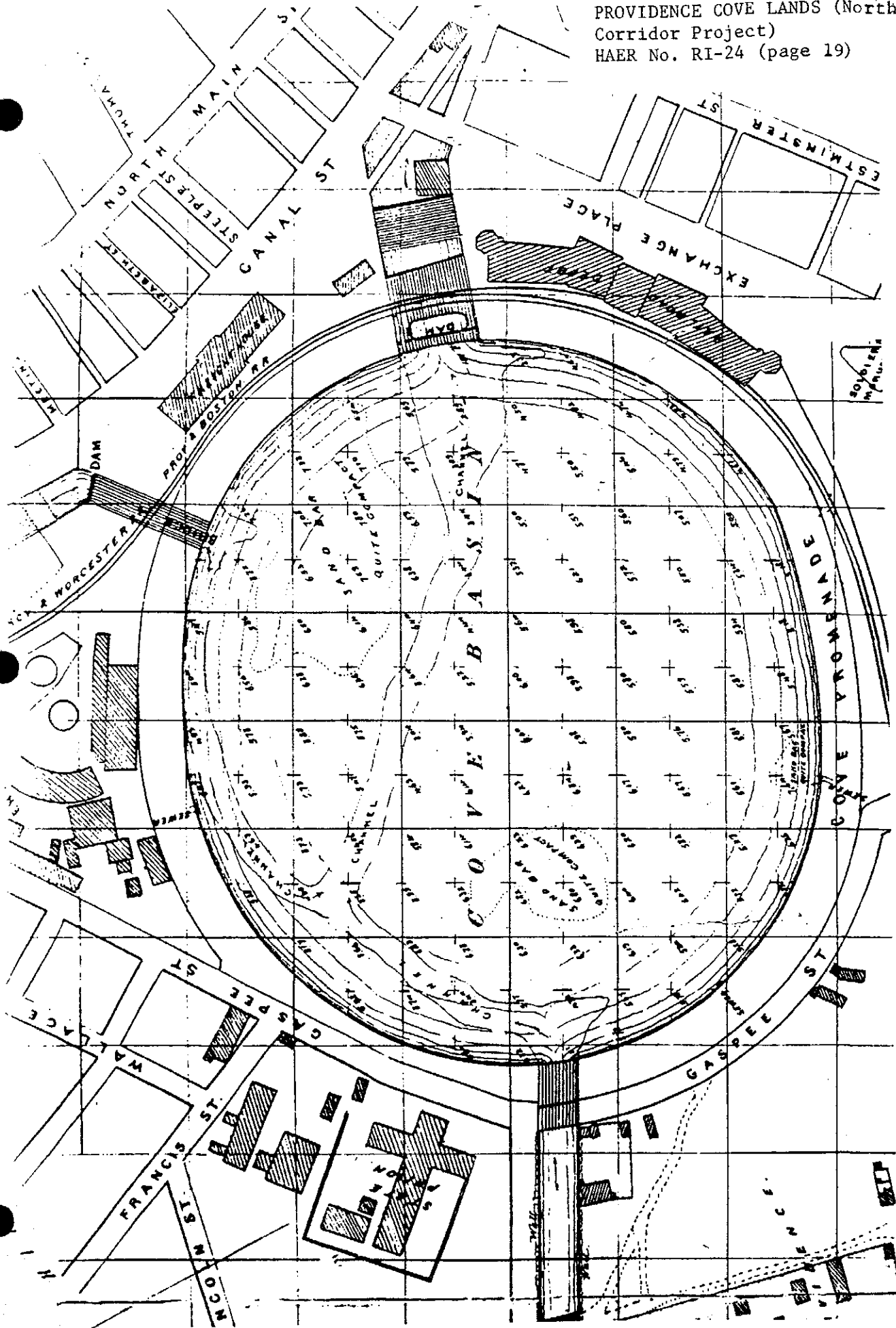


Figure 11. Detail of Cove Basin showing undredged Cove perimeter, 1876.



Figure 12. The Cove looking south from Smith's Hill in 1886. Note railroad yards in center fringing the cove. On left is the Tefft Freight House and Canal Street. Photograph, Rhode Island State House Archives.

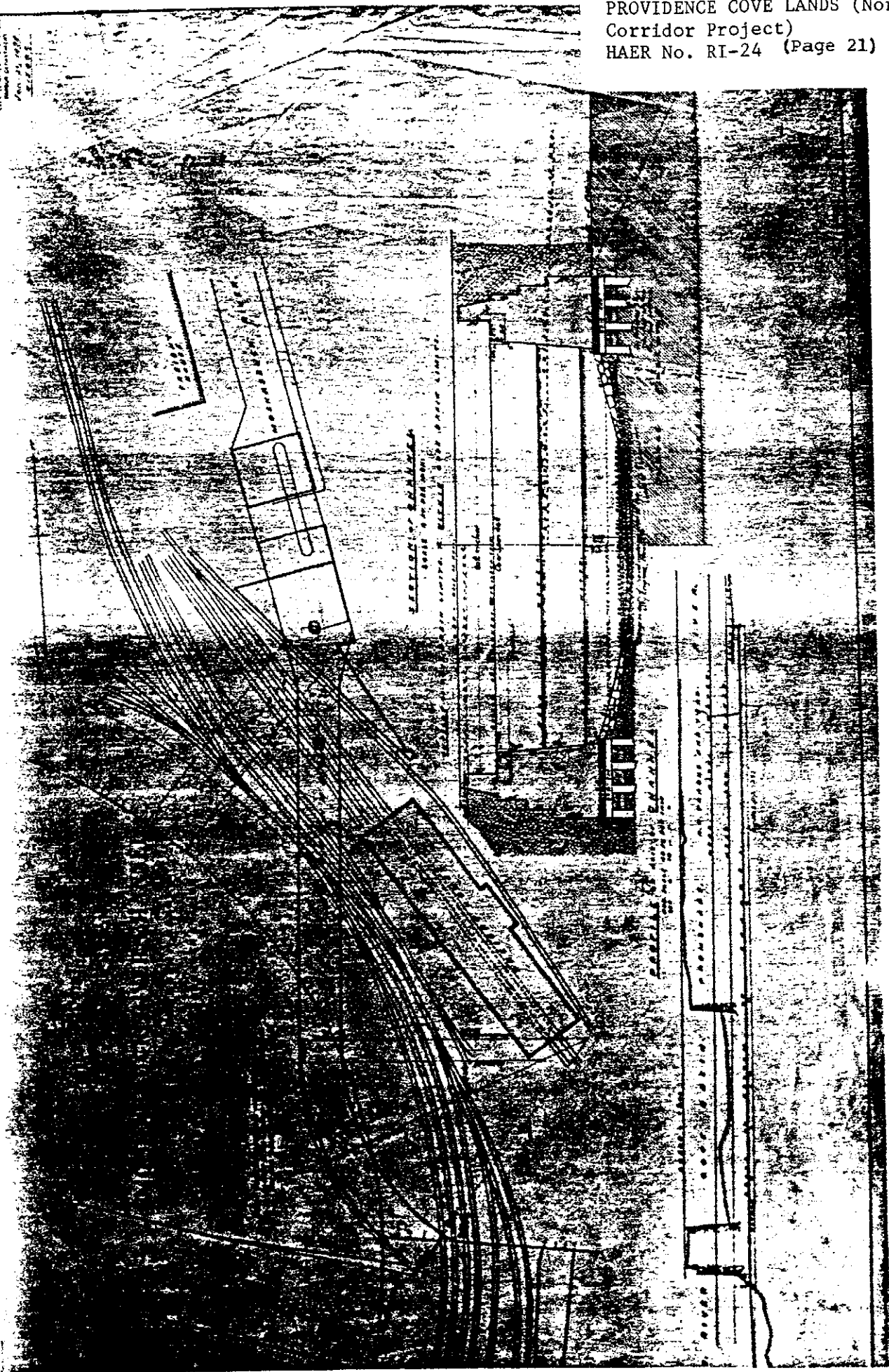
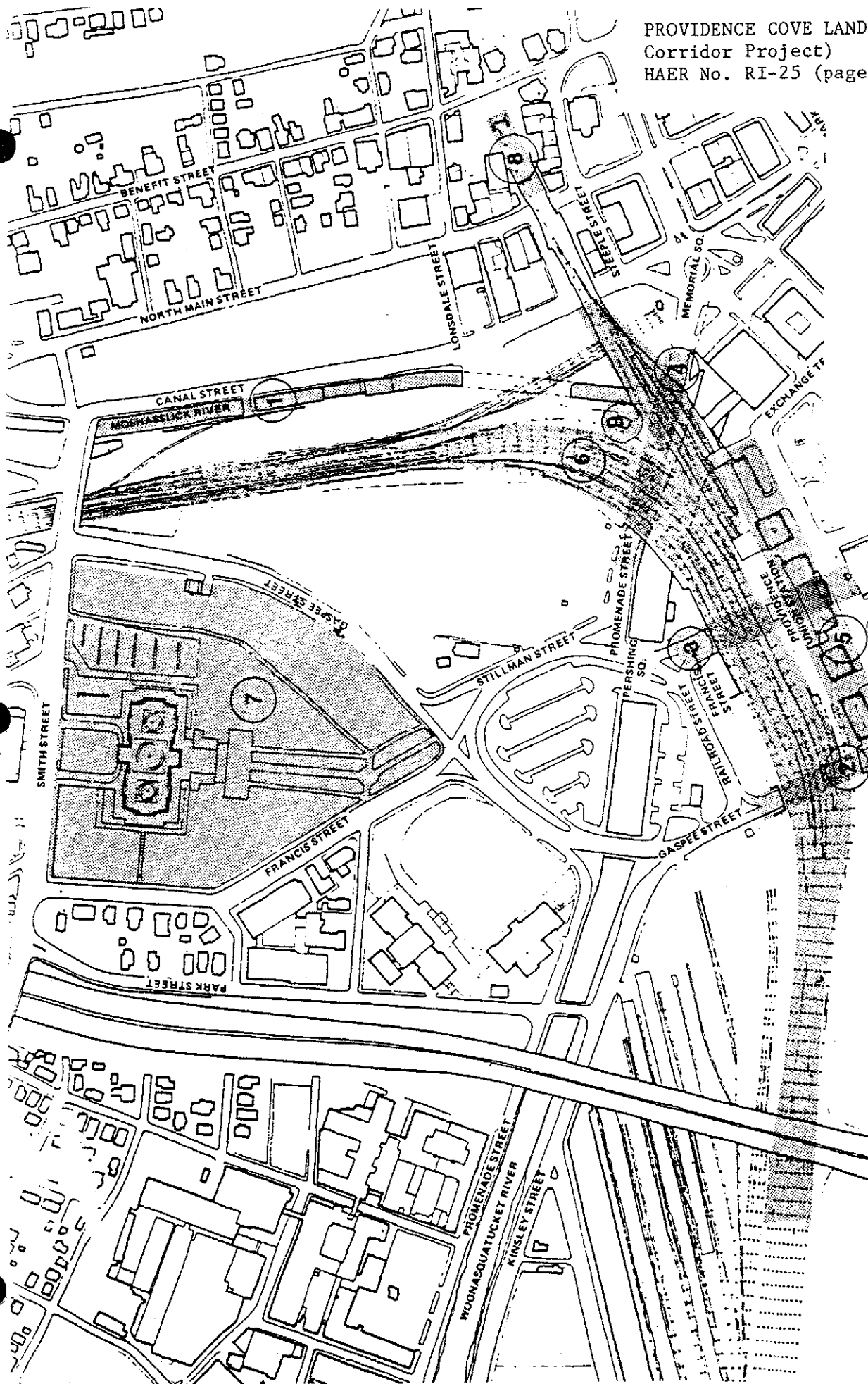


Figure 13. Plan showing the proposed extension of the Moshassuck River channel, 1889.
Original drawing at City of Providence Public Works Department.



Figure 14. Plan showing changes in Cove Basin vicinity, in connection with improved Station Terminal facilities, May 18, 1892. Original blueprint at City of Providence, Public Works Department.

Modern configuration of
Cove Lands.



- 1 Blackstone Canal
- 2 Gaspee Street Bridge
- 3 Francis Street Bridge
- 4 Promenade Street Bridge
- 5 Providence Union Station
- 6 Union Station Viaduct
- 7 Rhode Island State House Lawn
- 8 East Side Tunnel Portal
- 9 Promenade Street Interlocking Tower

